UDC 681.6.004.9

**INFORMATION TECHNOLOGY OF OPTIMIZATION PREVIOUS INKS FILLING PROCESS OF INK PRINTING SYSTEM WITH TWO FORM ROLLERS**

**U. P. Panovyk**

*Ukrainian Academy of Printing,
19, Pid Holoskom St., Lvov, 79020, Ukraine*

*ulianapanovuk@gmail.com*

***Research methodology.*** *To research the process of previous ink filling of ink printing system with two form rollers scientific methods were used: analysis, comparison and generalization. During fulfillment of the scientific work for construction of ink printing system model, methods of operational calculus, discrete conversion and automatic control theory were used. Researches were conducted using a computer simulation of ink printing system model in the environment of Matlab - Simulink*

***Results.*** *An ink printing system mathematical model with two form rollers of the virtual offset printing machine has been constructed. The simulator of ink printing system model has been built in the environment of Matlab – Simulink On the basis of the conducted researches the optimal amount of working cycles of ink printing system with two form rollers for previous ink filling has been determined.*

***Novelty.*** *The worked out information technology of the optimization of the process of the previous ink filling of ink printing system with two form rollers gives an opportunity to simplify the preparation of the printing machine to printing and to substantiallydecrease the proper technological charges.*

***Practical significance.*** *The simulator of ink printing system with two form rollers has been designed. It gives an opportunity to recreate the process of ink transmission from ink feeding unit to material to be printed and to simulate the onslaught of form rollers to the plate and it is an integral part of information technology.*